RESEARCH ARTICLE

Unveiling Hidden Strengths and Opportunities: An Evaluation of a Science High School's English Program

[1]John Daryl B. Wyson, [2]Zarita A. Manalo, [3]Merry Ruth M. Gutierrez
[1]*College of Advanced Studies, Philippine Normal University–Manila, Philippines*
[1]*English Unit, Philippine Science High School–Main Campus, Philippines*
[1]Corresponding author: wyson.jdb@stud.pnu.edu.ph

[2]*College of Advanced Studies, Philippine Normal University–Manila, Philippines*
Cavite State University–Naic Campus, Philippines
manalo.za@stud.pnu.edu.ph

[3]*College of Advanced Studies, Philippine Normal University–Manila, Philippines*
gutierrez.mrm@pnu.edu.ph

ABSTRACT

As part of its efforts to bolster technological and economic progress, the Philippines has established science high schools, which are secondary level education institutions that offer advanced courses in science, engineering, and mathematics. Apart from the said subjects, these schools are also known for excelling in academic English. Despite their success in this aspect, there has been a dearth of studies demonstrating how English programs of Philippine science high schools contribute in attaining certain achievements. Adapting the curriculum evaluation guides of the Berkeley Center for Teaching and Learning (2017) and the Vanderbilt University (2024), this paper attempted at unearthing the strengths of a science high school English curriculum as well as its opportunities for improvement. Feedback from selected nine graduates was solicited through survey questionnaire and one-on-one interview. Five themes pertaining to the curriculum's strengths emerged, namely sufficiency of content, student autonomy through skills development, inclusion of fun and interesting tasks, expertise and delivery of instruction, and monitoring of and feedback on student outputs. Additionally, three themes that identified its opportunities for improvement were discovered, namely preference for face-to-face learning experience, provision of more discussions, and implementation of a spiraling English curriculum. These findings may be used to enrich the program's design and

ARTICLE HISTORY
Submitted: June 14, 2024
Reviewed: August 27, 2024
Revised: November 23, 2024
Accepted: November 25, 2024
Published: November 26, 2024

KEYWORDS
curriculum evaluation; English curriculum; gifted education; language education

SUGGESTED CITATION
Wyson, J. D. B., Manalo, Z. A., & Gutierrez, M. R. M. (2024). Unveiling hidden strengths and opportunities: An evaluation of a Science high school's English program. *Philippine Journal for Language Teaching, 54*(1), 54–73.

implementation and to serve as a basis for designing English programs for other science high schools.	

Introduction

For a nation to become economically progressive, it must produce a critical mass of scientists and science, technology, engineering, and mathematics (STEM) professionals who can introduce developments and innovations that will be beneficial to its citizens and beyond (Ogena et al., 2010; Tulivuori & Ramanathan, 2022). Thus, in the Philippines, the goal of science education is to "produce scientifically literate individuals who are responsible decision makers and who can apply scientific knowledge to look for solutions to problems of the community" (Dela Cruz, 2022, p. 331). In response to this goal, the Philippine government established science high schools that offer an advanced STEM curriculum, emphasize research education, and are equipped with specialized laboratory facilities (Dacumos & Silva, 2023; Dela Cruz, 2022; Talaue, 2014). Admission into these institutions is free albeit it is based on merit; only those who passed their entrance examinations may enroll.

Related to their initiative to prepare the youth for science-oriented professions, science high schools also place a high premium on developing their students' English communication skills since these are essential in enabling them to engage in higher-level academic dialogue and communicate scientific findings to the general public. For instance, the Philippine Science High School identifies being an excellent communicator and the development of literacy skills as part of the intended outcomes of their curriculum (Philippine Science High School System, 2024). On a similar note, Thailand's Mahidol Wittanayusorn School offers advanced courses in English (Wittayanusorn School, 2021a). Likewise, the National University of Singapore (NUS) High School for Math and Science offers an extensive English program that aims to develop students' appreciation and critical analysis of different text types, to enhance their linguistic macro-skills, and to engage them in discussions of global issues (NUS High School of Math and Science, 2024).

Over the years, the advanced curricular offerings both in STEM and English courses have yielded desirable results for science high schools. These schools have consistently reported high admission rates in top universities in countries where they are located and overseas (Mahidol Wittayanusorn School, 2021b; NUS High School of Math and Science, 2024b; Philippine Science High School–Main Campus Guidance and Counseling Unit, 2023). Similarly, they have registered victories in international English competitions such as the Asian Literary Society Writing Content, Linguistics Olympiad (NUS High School of Math and Science, 2024a), and Asian English Olympics (Philippine Science High School–Main Campus English Unit, 2023).

Despite these achievements, there has been a lack of study that documents how the respective English curricula of science high schools contribute to overall student success. Hence, through the feedback of science high school graduates, the authors of this study attempted at unearthing the strengths of an English program offered in one

science high school, particularly its features that address institutional outcomes and students' aspirations. In addition, they also identified the program's opportunities for improvement.

Literature Review

Evaluation of Various English Curricula

In the past, studies have examined only some specific aspects of a science high school's English curriculum. For instance, Montemayor (2019) evaluated the effectiveness of a science high school's Creative Writing (CW) elective which was one of the subjects its English department used to offer, by doing the following: (1) tracking the performance of 15 enrollees in the periodical examinations of their Grade 10 English class throughout four grading periods; (2) asking the students to respond to a Likert scale survey based on Berkeley's Center for Teaching and Learning (2017) program evaluation tool; (3) comparing the CW syllabus with the Department of Education's (DepEd) Humanities and Social Sciences (HUMSS) Senior High School curriculum; and (4) interviewing students and teachers based on Vanderbilt University's (2024) guide for course evaluation. Results showed that the CW course participants' performance in the examinations gradually improved throughout the school year. Moreover, during the interviews, students reported that they experienced improvement in their writing skills, literary appreciation, and literary analysis skills. The CW course syllabus itself, however, specified only genres and prescribed readings, unlike the DepEd's humanities courses, which spell out competencies, program objectives, content standards, and performance standards. Likewise, the study was limited in scope as it focused only on one English subject, which was not part of the overall English program but was rather an optional course.

Apart from Montemayor's study, there were only a few other studies on the English program of science high schools. These studies supplied only tangential information. For instance, Racca and Lasaten (2016) examined the language proficiency of science high school students from Ilocos Region, Cordillera Region, and Cagayan Valley–all of which were part of a science high school system administered by the Department of Science and Technology (DOST). Through a descriptive-correlational design, they determined whether there was a correlation between the students' English language proficiency and their overall academic performance. Findings showed a positive correlation between the two variables. In another paper, Ubanos (2021) documented freshman students' struggles and coping mechanisms that came about as a result of having differing degrees of English proficiency upon entering the main campus of DOST's science high school. Similarly, Pawilen and Manuel (2018) reviewed the curriculum of educational programs for the gifted existing in the Philippines using narrative inquiry and document analysis. They identified several issues regarding gifted education. According to them, there is a need to develop an official and national curriculum for the gifted and a Filipino model of giftedness, provide more instructional and assessment materials, and conduct more teacher training sessions on handling gifted students. No specific comments were mentioned for science high schools.

Aside from the studies mentioned above, the evaluation of English programs, even those that were not conducted in science high schools, offer insights on how English subjects aid in meeting institutional, social, and personal goals. These studies predominantly employed qualitative means of data gathering to gain rich insights from various stakeholders (e.g., Adin-Surkis, 2015; Barrot, 2018; D'Angelo, 2016; Gerede, 2005; Kambur & Demirbulak, 2021; Sun, 2019; Waters & Vilches, 2008).

One study was the evaluation of certain national English curricula. For instance, Waters and Vilches (2008) evaluated the English learning area of the Philippines' Basic Education Curriculum (BEC). Through semi-structured focus group interviews with regional supervisors, division-level officials, English department heads, and public secondary school teachers in the National Capital Region and the Visayas, they identified the points for improvement in the implementation of the English program. Common themes that surfaced were the incompatibility of the curriculum design with the specific teaching-learning situations, the lack of professional support from the central administration of the DepEd, and the shortage of teachers. Thus, the study highlighted the importance of considering contextual factors in curriculum design and implementation. Aside from focus group interviews, document analysis may also be employed in evaluating an English curriculum. One example is Barrot's (2019) assessment of the DepEd's Language Arts and Multiliteracies Curriculum. In this study, the author identified the need for more specific competences, internal coherence, and integration of 21st century learning principles as the curriculum's points for improvement.

Studies have also assessed the English curricula of other Asian countries. Specifically, Sun (2019) used Kirkpatrick's (Kirkpatrick & Kirkpatrick, 2006) evaluation model to assess the extent to which English courses in the Cambodian English program (implemented in Grades 7, 8, and 9) were able to meet their objectives, namely to equip their students with language skills needed in ASEAN integration and to improve the regional and global competitiveness of Cambodia. The themes that emerged were the need for more qualified teachers and high-quality educational materials, the enhancement of students' listening and speaking skills, and the improvement of the phrasing of their program objectives. Likewise, Adin-Surkis (2015) examined the teachers' perceptions on a new English curriculum implemented in Israel through quantitative survey questionnaire and semi-structured interview. In this study, the teachers seemed to prefer the old curriculum as it provided concrete and specific grammar exercises and lessons (compared to the new one), which gave them more leeway to select content and activities. This perception may have been caused by the manner they were used to learning and teaching English, which was generally prescriptivist in nature (Adin-Surkis, 2015). Comparatively, Kambur and Demirbulak (2021) evaluated the Grade 5 English curriculum of Turkey through a questionnaire administered among 90 English teachers. Results showed that the participants had moderately positive impressions of the curriculum, but they also reported the lack of professional guidance, materials, and equipment, among other factors, as hindrances to the curriculum's effective implementation.

Apart from national curricula, English programs of specific institutions also underwent evaluation to examine the extent to which they were able to meet their

students' needs. For example, Gerede (2005) assessed the renewed English curriculum of Anadolu University to determine its effectiveness in terms of equipping students in English-medium programs with the skills necessary for academic success. Through a survey administered among students, it was found that the new curriculum provided opportunities to enhance students' reading, writing, speaking, and listening skills needed in their respective disciplines. Similarly, D'Angelo (2016) evaluated the World Englishes program of Chukyo University to determine its perceived benefits among their graduates. Results revealed that the students appreciated that they were able to communicate effectively using an educated Japanese English, and they enjoyed the communicative approach to language teaching. However, they had difficulties in navigating content in subject-specific English texts.

In a nutshell, studies on English curriculum evaluation identified the felt needs of students, examined the opportunities and challenges of their implementation, and documented students' perceived benefits. Such studies helped researchers in pinpointing the English programs' specific strengths and areas for improvement. While national curricula and specific institutional programs have already undergone curriculum evaluation, to date there seems to be a dearth of studies that examine the English program of science high schools.

Statement of the Problem

Given the lack of research assessing the English programs of science high schools particularly in the Philippines, this paper attempted to answer this overarching research question: how do recent graduates of a science high school perceive its English curriculum in terms of its strengths and opportunities for improvement? The research question sought to identify the specific aspects of the English curriculum that the graduates found helpful in their science high school journey. In addition, it explored its opportunities for improvement. The answers to the question could serve as a basis for future efforts for curriculum revision and enrichment.

Methodology

Research Design

This study employed a qualitative design wherein the participants' feedback on the English curriculum were obtained through qualitative survey questionnaire and semi-structured interview, both of which asked open-ended questions that solicited the insights of the graduates of a specific science high school. Thus, it allowed the participants to elaborate on their experiences as they engaged in the English program of the school. This approach attempted at unearthing meaningful insights that may address the research problem.

Context of the Study

The institution featured in this study is a national science high school that operates under the Philippines' DOST. For the purposes of this study, the name of the school shall be anonymized, and it will be referred to as Academic Excellence Science

High School-Flagship Campus (AESHS-FC) both in the body of this paper and in the references section. The pseudonym, "Academic Excellence Science High School," was also used in the study of Talaue (2014, p. 34). The term, Flagship Campus, is added in the pseudonym as the school was the first established science high school among its 16 campuses across the Philippines (Talaue, 2014). In addition, the school's curricula are patterned on the academic programs of the Bronx High School of Science (Talaue, 2014).

According to the school's official records, the AESHS-FC has the highest admission rates in the University of the Philippines College Admission Test (AESHS-FC Guidance and Counseling Unit, 2023), one of the Philippines' most competitive college admission examinations. On a similar note, it maintains a competitive percentile rating in the Scholastic Aptitude Test (SAT). For English subject, the percentile rank of the school from 2018 to 2023 ranged from 88% to 92%. Below is the summary of the AESHS-FC's percentile ratings in the English component of the SAT from 2018-2023 (Table 1):

Table 1

AESHS-FC Performance in the SAT Reading and Writing Components from 2018 to 2023 (AESHS-FC Guidance and Counseling Unit, 2023)

	2018	2019	2020	2021	2022	2023
Average percentile	88%	86%	93%	89%	87%	92%
Number. of examinees	136	133	30	53	162	86

The current English program of the AESHS-FC consists of six subject offerings wherein one English subject is taken in every grade level. For Grades 7 to 10, the English subject consists of language and literature components. For the language component, basic concepts in grammar and composition are taught in Grades 7 and 8. In Grade 9, genre-based writing, particularly reports, reaction papers, and position papers are covered. In Grade 10, professional communications, specifically writing resumes, business letters, and project proposals, are treated as language lessons. As for the literature component, the selections are categorized according to their geographical origins: Philippine Literature in Grade 7, African and Asian Literature in Grade 8, British and American Literature in Grade 9, and World Literature in Grade 10. In Grade 11, the English subject focuses on academic writing, and in Grade 12, on oral communication.

Participants

The students of the AESHS-FC are generally considered as potentially gifted (Cruz, 1989; Larroder & Ogawa, 2015; Pawilen & Manuel, 2018). Their admission is a result of a rigorous selection process. Ideally, the applicants are Grade 6 students whose grades in Science and Math are 85 or better. If this criterion is not met, they may still apply for a slot, provided that they belong to the top 10% of their school's

graduating batch. Every year, the number of applicants totals around 30,000. They would then take the entrance examination; only the top 240 scorers are admitted into the AESHS-FC.

During COVID-19 pandemic years particularly from 2020 to 2022, the AESHS-FC implemented an alternative admissions procedure. Students were required to submit elementary school credentials and participate in an online essay writing examination. This procedure was enacted to comply with the government-mandated health protocols.

For this study, nine graduates of the AESHS-FC from Batches 2021, 2022, and 2023 responded to a survey. At least, two of them participated in a semi-structured interview. Due to the exploratory and qualitative nature of the study, a small sample size was preferable (Kennedy et al., 2007; Thastum et al., 2008). The number of participants was consistent with that involved in other qualitative studies on assessment of English programs. In Canilao's research (2019), there were 10 participants while in Waters and Vilches' study (2008), there were eight respondents from the NCR and nine participants from the Visayas.

All of the participants had undergone the six-year program of the AESHS-FC, and they were admitted to various local and foreign universities. Nonetheless, they experienced instructions in slightly different ways as they took some of the courses online: Batch 2021 took Grade 12 English online; Batch 2022 took Grade 11 and Grade 12 English online; and Batch 2023 took Grade 10 and Grade 11 English online. These online courses were redacted as per the advice of the school's Board of Trustees since they were taken at the height of COVID-19 pandemic. Nevertheless, they were the same in essence as the pre-pandemic courses, and all the important topics and key skills were retained. Table 2 shows a more detailed summary of the participants' profile.

Table 2

Profile of the Participants

Participant (P) Number	Year Graduated	College Degree Pursued	Current Institution	Universities Where Students Were Accepted
1	2023	Bachelor of Science in Health Sciences	Ateneo de Manila University	University of the Philippines Manila, Ateneo de Manila University, and De La Salle University
2	2023	Bachelor of Science in Health Sciences	Ateneo de Manila University	Ateneo de Manila University, University of the Philippine, University of Santo Tomas, De La Salle University
3	2021	Bachelor of Science in Data Science and Molecular Biology	University of California at Berkeley	University of California at Berkeley
4	2023	Bachelor of Science in Architecture	University of the Philippines Diliman	University of the Philippines – Diliman, Ateneo de Manila University. De La Salle University – Manila, Arizona State University, SUNY University at Buffalo, SUNY Stony Brook University, La Salle University (Philadelphia)
5	2022	Bachelor of	Ateneo de	Ateneo de Manila University,

		Science in Chemistry with Materials Science and Engineering	Manila University	University of the Philippines, De La Salle University, University of Santo Tomas
6	2023	Bachelor of Science in Mechanical Engineering	Kyoto University	Arizona State University, University of the Philippines, Ateneo de Manila University, University of British Columbia, Kyoto University
7	2023	Bachelor of Science in Computer Science	University of the Philippines Diliman	University of the Philippines Diliman, Ateneo de Manila University, De La Salle University
8	2023	Bachelor of Science in Psychology	University of the Philippines Diliman	University of the Philippines Diliman, De La Salle University, Ateneo de Manila University, University of Santo Tomas Case Western Reserve University, Drexel University, Florida Institute of Technology, Hofstra University, Milwaukee School of Engineering, New York Institute of Technology, New York University Shanghai, SUNY Stony Brook University, SUNY University at Buffalo Syracuse University, University of Wisconsin – Madison
9	2023	Bachelor of Science in Biology	University of the Philippines Diliman	University of the Philippines Diliman, Ateneo de Manila University, De La Salle University

Research Instrument and Data Gathering

In the survey instrument, the questions were adapted from the items in the Berkeley Center for Teaching and Learning (2017) curriculum evaluation guide. Below are the questions in the said tool:

1. How would you rate the overall effectiveness of the instructor?
2. How satisfied are you with the course?
3. What do you think are the strengths of this course?
4. In what ways can the course be improved?

The questions were disseminated to the graduates using Google Form. The corresponding author contacted them using either social media or email and asked them to fill out the form. Twenty students were contacted, but only nine responded to the form. Among the nine who responded, two graduates agreed to undergo a semi-structured interview. The interviews were informed by questions adapted from Vanderbilt University's (2024) guide questions for curriculum evaluation:

1. What do you see as the primary learning objective of the curriculum?
2. What aspects of this course and/or the instruction would you identify as most helpful to your learning? How have these aspects helped you learn the courses in the English curriculum?
3. What modifications to this course do you believe would help future students to learn more effectively? Why do you believe these changes would improve their learning?

The interviews transpired via Google Meet. They were conducted one-on-one wherein the corresponding author served as the interviewer. The second author transcribed the proceedings of the interviews.

The validator, the third author, of the two research instruments is a professor of curriculum evaluation. She served as a resource person in designing the Reading Education curriculum of the Philippine Normal University–Manila and the English curriculum of the DepEd.

Through written narratives (as answers for the survey questions) and interview responses, the participants were able to highlight the aspects of the English program that they found most memorable and poignant, particularly their lived experiences in relation to the English subjects they took during their stay at the AESHS-FC. The administrations of survey questionnaire and semi-structured interview were consistent with the goals of qualitative research described by Creswell (2014).

Data Analysis

The data obtained underwent two rounds of coding. In the first round, the first author classified the responses under broad categories. After which, the second author performed the second round of coding where she then grouped the responses according to themes. The third author conducted inter-coder validation to ascertain consistency between the themes and the excerpts. These themes were selected for presentation in the results section.

Ethical Considerations

The standard research protocols observed by the AESHS-FC were followed during the study. Through a formal letter, the corresponding author requested the SAT and college admissions data from the Guidance and Counseling Unit. A copy of this request was given to the student services chief and to the campus director. The participants, who were 18 years old and above, were no longer required to obtain consent from their parents. All graduates whose responses appear in this paper agreed to participate in the study. All information and documents obtained for the study were treated with care and in compliance with the data privacy policies of the AESHS-FC.

Results and Discussion

To address the dearth of research assessing the English curricula of science high schools, this study examined the perceptions of the AESHS-FC graduates on their secondary English program in terms of its strengths and opportunities for improvement. Through qualitative survey and semi-structured interview, they reported their experiences relevant to the two aforementioned areas. In terms of strengths, five themes emerged: sufficiency of content, student autonomy through skills development, inclusion of fun and interesting tasks, expertise and delivery of instruction, and monitoring of and feedback on student outputs. The first three themes correspond to the course proper while the last two themes referred to the instructors. All themes and their frequencies are summarized below (Table 3).

Table 3

Summary of Themes and their Frequencies

Themes	Frequencies
Sufficiency of content	40
Student autonomy through skills development	20
Inclusion of fun and interesting tasks	12
Expertise and delivery of instruction	38
Monitoring of and feedback on student outputs	14
Preference for face-to-face learning experience	9
Provision of more discussions	9
Implementation of a spiraling English curriculum	8

In Table 3, the left column enumerates the most common themes that emerged from the participants' responses, and the right column indicates the number of times each theme appeared. The top three themes were sufficiency of content (40), expertise and delivery of instruction (38), and student autonomy through skills development (20). Meanwhile, the themes with least occurrences were implementation of a spiraling English curriculum (8), provision of more discussions (9), and preference for face-to-face learning (9).

Results

Sufficiency of Content

Sufficiency of content means that the lessons taught in the English subjects met their needs and expectations. This theme appeared with 40 responses across the grade levels. According to the respondents, the curriculum contents were adequate and provided sufficient learning to the students. The specific aspects that the students highlighted were grammar, writing, and literature. For instance, according to P2, Grade 7 English prepared her for the succeeding English courses in high school:

> It provided me with a quick refresher on ***grammar rules*** and ***figures of speech***, things that ***would go a long way for the rest of the English courses in high school***. It also allowed me to appreciate ***Philippine history and literature*** better. [P2, Grade 7 English]

Based on the sample excerpt, it seemed that enhancing grammatical accuracy was one of the curriculum's desired outcomes. Another participant, P1, also appreciated the practice wherein grammar points were not simply taught in discrete points but were integrated with various writing styles: "This course included many readings (again) however, this time, it focused more on ***writing styles*** such as ***persuasive, narrative***, etc." [P1, Grade 9 English]. She also highlighted the variety of literary texts they encountered: "In addition to this, we were also given readings such as ***poems, epics, limericks***, and ***a lot more***" [P1, Grade 9 English].

For the English courses in the upper grade levels, sufficient content meant that the topics covered were applicable in contexts outside the classroom: "In terms of ***real-***

world use, it is the best course. As the send-off course, it is the best to prepare the students" [P6, Grade 12 English]. P1 also expressed a similar observation, particularly for Grade 10 English:

> Moreover, we learned how resumes should look like (and, in extension, CVs), as well as write drafts of what would be our college essays. In fact, I ***used my Grade 10 college essay output as a draft for the essay that got me a Director's List Scholarship from ADMU***. I am very satisfied with the course. [P1, Grade 10 English]

As seen in the excerpts, contents that were perceived as sufficient and useful were the ones that were utilized outside the confines of the subject, particularly in college application. This observation implies that transfer skills (skills that may be used in contexts apart from the subject in which they were taught) were valued by the graduates.

Student Autonomy through Skills Development

The theme, student autonomy through skills development, appeared with 20 responses. Student autonomy refers to the freedom enjoyed by the learners to pursue subject-related projects of their own choosing. This privilege was made possible by the development of their macro-linguistic skills, which enabled them to successfully complete the said projects. The participants identified the enhancement of their writing and speaking skills as a strong point of the curriculum. One participant commented, "It helps in developing both my written and oral communication skills" [P2, Grade 9 English]. Skills development, however, was not seen as an end in itself but as an instrument for empowering them to independently perform research tasks across disciplines: "Emphasis on practical writing and precision are crucial in ***making a student understand completely the concepts they want to research and write about***." [P7, Grade 11 English]. Research was perceived as purposeful for developing the skills they learned in their English classes. One participant specifically pointed out the English program's contribution to developing their proficiency in science and technology research. The participant mentioned, "In fact, it ***helped me with my STEM research***, not just in terms of the writing skills but also the mindset. It gave us students the opportunity to ***expand our research skills in another field***." [P4, Grade 11 English]." Specifically for Grade 11 English, one participant appreciated the autonomy given to them in terms of choosing a project they wanted to pursue: "Thoroughly enjoyed this course since I was able to work on a concept paper with a topic that's ***not only meaningful but also interesting to me personally***" [P2, Grade 11 English].

Likewise, P5, who took Grade 12 English, expressed her appreciation of the said course as it empowered her to speak in public:

> Since the course was more focused on public speaking and communication, my area of weakness, it was great to have the space where ***I can have these skills developed***. I would say that I did ***improve a lot in terms of self-expression*** and ***speaking*** after taking this course. [P5, Grade 12 English]

Skills development, then, was seen as a vehicle towards autonomy since, according to the participants, improving their mastery of language skills enabled them to choose and work on academic projects of their choosing. This observation is connected to the succeeding theme, which described the pleasure the graduates felt in working on the said projects.

Inclusion of Fun and Interesting Tasks

The theme, inclusion of fun and interesting tasks, appeared 12 times in the responses. These tasks may be described as pleasurable experiences by the participants while performing subject-related assignments and reading the prescribed materials. The participants found the learning experiences enjoyable and interesting. The course became most memorable to the students because they engaged in meaningful and fun activities like role-playing and dance numbers. P5, in particular, expressed the fun she experienced while enrolled in Grade 9 English:

> I remember Grade 9 English being a ***fun experience*** because we did a ***variety of activities*** that are outside just reading and writing. We would do skits and dance numbers based on the worlds of our readings, and it was just overall ***enjoyable***. I believe continuing on involving fun activities for the delivery of the lessons would be the right direction to go. [P5, Grade 9 English]

Having fun seemed to be important for the participants, mentioning specific classes such as Grade 8 English: "Grade 8 English is, to this day, the ***most enjoyable and memorable*** English class I've taken" [P7, Grade 8 English]. In the case of the graduates, however, having fun was understood not only in terms of games and laughter; it also referred to the innate pleasure which they experienced during reading activities: "This course allowed me to broaden my reading selection into a wider variety of genres. I would usually ***find myself enjoying interesting reads*** as the material really was ***enjoyable*** to go through" [P5, Grade 8 English].

Apart from the responses regarding the course proper, the participants also shared their insights about their experiences with their teacher. Two themes pertaining to the instructors emerged.

Expertise and Delivery of Instruction

The theme, expertise and delivery of instruction, appeared with 38 responses. This theme covers the teachers' content knowledge and their ability to relate it with their students. The graduates appreciated instructors who showed expertise in the subject matter, such as the Grade 11 English instructor who, according to P1, "taught us a lot about professional writing in the academe" and "was able to show how much more ***knowledgeable she was outside of academic writing***." Additionally, the instructors were expected to "provide ***more than the minimum*** needed by a student in [that] specific course" [P1, Grade 7 English] and be "greatly, ***proficient***, and greatly ***knowledgeable*** about the subject they were teaching" [P7, Grade 7 English]. The

graduates appreciated lectures that are "intelligent and insightful" [P7, Grade 9 English] and that they "were taught a lot (this year) about professional writing in the academe (through) an instructor who was ***clearly knowledgeable in the field***. One of the participants also commented that since their instructor previously taught in college, he was "able to ***bring the students to a greater level*** than other batch mates through their guidance" [P6, Grade 8 English].

Apart from being knowledgeable of the subject, instructors were also expected to show expertise in the delivery of instruction. This notion refers to the ability of the teachers to facilitate meaningful learning engagements. P1, P7, and P9 commended their teachers for "***making the lessons engaging***" [P7, Grade 8 English] and ***facilitating interactive discussions*** [P1, Grade 7 English; P9, Grade 8 English]. In the case of the AESHS-FC, this observation was evident not only during face-to-face classroom interactions but also at the height of the COVID-19 pandemic wherein "the instructor was very effective with ***how he provided synchronous lessons and pre-recorded videos*** for every lesson" [P8, Grade 10 English]. Such a level of delivery is expected to occur in a "***comfortable and constructive environment*** where we (the students were able to give each other feedback without fear" [P4, Grade 12 English]. In contrast, instructors who were considered traditional, specifically those who regularly employed "***board work***, ***recitations***, and ***lectures***" [P5, Grade 7 English] were deemed as ineffective. The graduates did not admire those who "simply asked students to read information on slides" [P9, Grade 12 English].

Monitoring of and Feedback on Student Outputs

Another aspect of instructor performance that the participants commended on was monitoring of and feedback on student outputs, which appeared with 14 responses. Monitoring is the practice of regularly checking students' progress as they complete a specific task, and feedback is about the correction or instruction given when checking students' works. Especially when it comes to academic writing, the participants preferred those teachers who would be "very ***hands on*** when it came to ***making sure*** that the students were ***on the right track with their papers***… and how he would ***actively give feedback*** on how (their) writing could be improved" [P5, Grade 11 English]. Likewise, P1 also appreciated that his Grade 10 English instructor "gave students ***ample feedback*** and encouragement" [P1, Grade 10 English].

As for the English program's opportunities for improvement, three themes emerged from the responses. These themes are the preference for face-to-face learning, the provision of more discussions, and the implementation of a spiraling English curriculum.

Preference for Face-to-Face Learning Experience

Face-to-face learning experience refers to the conduct of lessons in a specific physical place wherein all participants are present, such as in a classroom. As stated earlier, interactive and engaging discussions were one of the features of the English program that the participants admired. Hence, this aspect was also found wanting during the pandemic when face-to-face classes were not permitted; this sentiment appeared with nine responses. For instance, one participant remarked that she "***wasn't***

able to fully experience the course in the way it was designed to be taken" [P2, Grade 9 English]. P2 was referring to the face-to-face discussions prior to COVID-19 pandemic. This limitation was also observed by the graduates who took Grade 11 English, an academic writing and qualitative research course, delivered in an online format. As a case in point, P7 expressed her disappointment for being unable to gather data for her research: "I ***would have loved to implement my research paper***, but I think the course itself is not inherently to blame for the ***lack of practical application*** due to the ***ongoing pandemic***." [P7, Grade 11 English]. They preferred face-to-face delivery as it provided more opportunities for "both ***verbal and nonverbal communication***" [P5, Grade 12 English]. In this particular case, the communication opportunities mentioned by P5 refer to both classroom interaction and public speaking activities since both topics are covered by Grade 12 English.

Provision of More Discussions

Provision of more discussions can be defined as the verbal classroom exchanges that transpired as part of the learning process. This theme appeared with nine responses. The participants shared that "the course would be ***better*** if the reading materials were ***discussed more***" [P8, Grade 8 English]. In particular, they preferred "less readings in terms of quantity but more ***in-depth discussions*** on each one" [P2, Grade 7 English]. This response suggests their penchant for engaging in literary and non-literary texts through close reading and thorough analyses over a quick and shallow survey of lesson content. Moreover, such a comment may also indicate that there was a lack of time in the delivery of topics, thus sacrificing the quality of discussions. This observation was expressed by P8 and P9. P8 commented that she "would have preferred if the course was done face-to-face with more ***in-depth discussions*** on the reading materials" [P8, Grade 10 English], while P9 expressed that "the pandemic ***limited synchronous discussions***" [P9, Grade 10 English].

Implementation of a Spiraling English Curriculum

A spiraling English curriculum is a program where topics introduced in earlier grade levels are revisited and deepened in the succeeding grade levels. This kind of program is aimed at establishing coherence in the delivery of lessons. Eight of the responses expressed the need to harmonize the AESHS-FC English curriculum to gradually prepare students for tasks in higher levels and to avoid redundancies in content. The responses of the participants imply a lack of vertical alignment in the progression of topics:

> I think it's a bit weird for me before because I think most of the ***grammar pointers were only focused in Grade 7*** if I remember correctly. So I think it's nice to have like ***reviews of grammar as well, even in the next levels***, I believe. But I think I also understand the limitations of the time, especially because of the material given. [P2, Grade 7 English]

In addition to this, P1, who took Grade 9 and Grade 10 English courses, commented about the seeming redundancy of Grade 9 and Grade 10 English in terms

of choices of texts since "the themes of the three and four ***were similar*** because they were ***about like Western Literature***" [P1, Grade 9 and Grade 10 English]. Moreover, there was a demand to better integrate scientific language in the language component of the English program:

> Furthermore, it may be beneficial to talk more about ***how English is used in the sciences***. Topics may include a ***secondary lesson*** on bibliographies or ***how scientific terms are coined in English***. As the global scientific language is English, such is ***vital*** for the Grade 7 students. [P7, Grade 7 English] [P7, Grade 7 English]

Discussion

The study aimed to document the perceptions of the recent AESHS-FC graduates on its English curriculum in terms of its strengths and opportunities for improvement. Through survey and interview responses, they identified the strengths of the program. Similarly, they reported its opportunities for improvement. Sufficiency of content, student autonomy through skills development, inclusion of fun and interesting tasks, expertise and delivery of instruction, and monitoring of and feedback on student outputs were identified as the program's strengths. Preference for face-to-face learning experiences, provision of more discussions, and implementation of a spiraling curriculum were determined as the opportunities for improvement.

In particular, the participants valued the skills that they acquired in their duration of their stay in the school, such as academic writing and public speaking skills. This result is consistent with the one reported by Montemayor (2019) wherein the participants identified improved writing skills as a desired curricular outcome.

Nonetheless, as pointed out by P4 and P7, the skills that they learned would have become more meaningful if they can be applied outside the English classroom. For instance, P4 said that the English classes expanded their "***research skills in another field***." Similarly, P7 mentioned that students can benefit from lessons on "***how English is used in the sciences***." These comments resonate the responses of Ubanos's (2021) and Sun's (2019) participants who specified the need for them to apply the knowledge and skills they are learning in English not just in other subjects but also in real-world contexts.

P7's response about the need to integrate scientific language in the English lessons implies the need for a clearer horizontal alignment of the English program with other subjects. On a similar note, the participants observed that the AESHS-FC English curriculum may benefit from a more explicit vertical alignment of lessons to avoid redundancies in language and literature lessons. Like the observations of Waters and Vilches (2008), there may be a need to further operationalize the desired outcomes of the curriculum not only in terms of individual courses but also in terms of the program as a whole.

Apart from content, the delivery of the curriculum was also highlighted by the participants, who preferred student-centered approaches such as interactive face-to-face

discussions and assessment tasks. They viewed a curriculum that takes into consideration their needs and aspirations and allows them to exercise autonomy and creativity as positive. This observation fortifies the call of Pawilen and Manuel (2018) for curricular programs designed for the potentially gifted, as in the case of the AESHS-FC students. While this may be the case, the graduates still highlighted the importance of instructor expertise and feedback as these are instrumental in ensuring the quality of their works.

Conclusion

This study sought to address the gap on how the AESHS-FC English curriculum potentially contributes in achieving institutional performance indicators and fulfilling the felt needs of the graduates. Through the participants' responses, the hidden strengths and opportunities for improvement of the AESHS-FC English program were explored. In particular, sufficiency of content, student autonomy through skills development, inclusion of fun and interesting tasks, expertise and delivery of instruction, and monitoring of and feedback on student outputs were perceived as the English program's strengths. Additionally, preference for face-to-face learning experiences, provision of more discussions, and implementation of a spiraling curriculum were identified as the points for improvement.

Despite the limited sample size of the respondents, the study generated valuable insights regarding the features of the English program of a science high school. The findings indicated, albeit to a limited extent, the curricular features that the AESHS-FC graduates perceived as commendable. Despite the presence of these features, the curriculum still needs to improve in addressing the students' felt needs and clamor for more meaningful classroom engagements. These findings, in turn, may serve as inputs for reviewing and enhancing the English curriculum of other science high schools.

The results of this study, however, may not be generalized across various secondary school contexts. For one, there is a limited number of participants, and as such, it is also only exploratory in nature. Hence, future studies may include more participants, even those from other AESHS campuses. Structured surveys based on the themes reported here may be employed to collect quantitative data. Moreover, researchers may take into consideration how the different aspects of the AESHS-FC mission and vision as well as its curriculum framework may be operationalized or revised in view of future results. Likewise, aside from AESHS-FC, other studies may also be conducted in other science high schools both in the Philippines and abroad to obtain richer insights regarding the role of English in science high schools.

Funding

The corresponding author is a recipient of the DOST's Human Resources Development Program, which funds his doctoral studies.

Acknowledgement

The authors would like to thank the DOST–Science Education Institute, Philippine Normal University–Manila, and AESHS-FC for making this study possible.

Declaration of Ownership

We, the authors, declare that this study is our original work produced as an output for the doctoral course ELE 807 Curriculum Development in Language Education, offered at the Philippine Normal University–Manila.

Conflict of Interest

This study has no conflict of interest.

ORCID

[1]John Daryl B. Wyson, https://orcid.org/0009-0000-5528-1186
[2]Zarita A. Manalo, https://orcid.org/0009-0003-9252-1611
[3]Merry Ruth M. Gutierrez, https://orcid.org/000-0002-1884-2690

References

Academic Excellence Science High School – Flagship Campus Guidance and Counseling Unit. (2023). *College admissions data*.

Adin-Surkis, A. (2015). Teachers evaluate the new curriculum in English: Views regarding evaluation and evaluation tools. *Research in Education, 93*(1), 34–59. https://doi.org/10.7227/RIE.0009

Barrot, J. S. (2018). English curriculum reform in the Philippines: Issues and challenges from a 21st century learning perspective. *Journal of Language, Identity & Education, 18*(3), 145–160. https://doi.org/10.1080/15348458.2018.1528547

Berkeley Center for Teaching & Learning. (2017). *Course evaluations question bank*. University of California, Berkeley. https://teaching.berkeley.edu/course-evaluations-question-bank

Canilao, M. L. E. N. (2019). Looking through the eyes of global Englishes: Enhancing English language teaching in multicultural classrooms. In F. Fang & H. P. Widodo (Eds.), *Critical perspectives on Global Englishes in Asia* (pp. 84–103). Multilingual Matters.

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

Cruz, J. M. (1989). The research program of the Philippine Science High School. *Journal of Chemical Education, 66*(11), 946. https://doi.org/10.1021/ed066p946

Dacumos, L. P., & Silva, D. (2023). Reflections beyond implementation: Evaluation of the project-based learning in the research curriculum of the Philippine Science High School–Luzon campuses. *International Journal on Research in STEM Education, 5*(1), 1–16. https://doi.org/10.33830/ijrse.v5i1.1582

D'Angelo, J. F. (2016). *A broader concept of world Englishes for educational contexts: Applying the "WE enterprise" to Japanese higher education curricula* [Doctoral thesis, North-West University, Vaal Triangle Campus]. NWU-Boloka Institutional Repository. https://repository.nwu.ac.za/bitstream/handle/10394/17014/D%27Angelo_JF.pdf?sequence=1

Dela Cruz, R. J. D. (2022). Science education in the Philippines. In R. Huang, B. Xin, A. Tlili, F. Yang, X. Zhang, L. Zhu, & M. Jemni (Eds.), *Science education in countries along the Belt & Road* (pp. 331-345). Springer.

Gerede, D. (2005). *A curriculum evaluation through needs analysis: Perceptions of intensive English program graduates at Anadolu University* [Master's thesis, Anadolu University]. https://earsiv.anadolu.edu.tr/xmlui/handle/11421/4176

Kambur, S., & Demirbulak, D. (2018). An evaluation of 5th grade intensive English language curriculum in terms of teacher opinions. *International Journal of Languages' Education and Teaching, 9*(2), 323-343. https://doi.org/10.29228/ijlet.51036

Kennedy, F., Haslam, C., Munir, F., & Pryce, J. (2007). Returning to work following cancer: A qualitative exploratory study into the experience of returning to work following cancer. *European Journal of Cancer Care, 16*(1), 17-25. https://doi.org/10.1111/j.1365-2354.2007.00729.x

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). Berrett-Koehler.

Larroder, A., & Ogawa, M. (2015). The development of a self-evaluation checklist for measuring Filipino students' science giftedness. *Asia-Pacific Science Education, 1*(1), 1–20. https://doi.org/10.1186/s41029-015-0002-0

Mahidol Wittayanusorn School. (2021a). *Academic.* https://www.mwit.ac.th/en/academic/

Mahidol Wittayanusorn School. (2021b). *Scholarships*. https://www.mwit.ac.th/en/scholarships/

Montemayor Jr., B. (2019). Assessment of the creative writing elective at the Philippine Science High School–Main Campus. *Asian Journal of Multidisciplinary Studies, 2*(2), 50–57.

NUS High School of Math and Science. (2024). *2023 achievements*. https://www.nushigh.edu.sg/our-dna/achievements/2023/

NUS High School of Math and Science. (2024). *University placement*. https://www.nushigh.edu.sg/admissions/university-placement/university-placement/

Ogena, E. B., Laña, R. D., & Sasota, R. S. (2010). *Performance of Philippine high schools with special curriculum in the 2008 Trends in International Mathematics and Science Study* (TIMSS-Advanced) [Conference session]. *11th National Convention on Statistics*, Mandaluyong, Philippines.

Pawilen, G. T., & Manuel, S. J. (2018). A proposed model and framework for developing a curriculum for the gifted in the Philippines. *International Journal of Curriculum and Instruction, 10*(2), 118–141.

Philippine Science High School System. (2024). *PSHS six-year curriculum subject matrix*. https://pshs.edu.ph/curriculum/#

Philippine Science High School–Main Campus English Unit. (2023). *English unit competitions 2019-2023*.

Philippine Science High School–Main Campus Guidance and Counseling Unit. (2023). *College admissions data*.

Racca, R. M. A. B., & Lasaten, R. C. S. (2016). English language proficiency and academic performance of Philippine Science High School students. *International Journal of Languages, Literature and Linguistics, 2*(2), 44–49. https://doi.org/10.18178/ijlll.2016.2.2.65

Sun, S. (2019). A case study evaluation of the curriculum of English subject for lower secondary school in Cambodia. *American International Journal of Social Science, 8*(1), 78–89. https://doi.org/10.30845/aijss.v8n1p11

Talaue, F. T. (2014). Social equity and access to a Philippine STEM school. *Theory Into Practice, 53*(1), 33–40. https://doi.org/10.1080/00405841.2014.862120

Thastum, M., Johansen, M. B., Gubba, L., Olesen, L. B., & Romer, G. (2008). Coping, social relations, and communication: A qualitative exploratory study of children of parents with cancer. *Clinical Child Psychology and Psychiatry, 13*(1), 123-138. https://doi.org/10.1177/1359104507086345

Tulivuori, J., & Ramanathan, S. (2022, February 24). STEM education is vital to national development. Here's how we can support it. *Asian Development Bank*. https://blogs.adb.org/blog/stem-education-vital-national-development-here-s-how-we-can-support-it

Ubanos, F. J. A. (2021). Unequal adjustments: The effect of "unequal Englishes" on the adjustment of 7th grade students to a STEM high school and its implications on the STEM curriculum. *International Journal of Second and Foreign Language Education, 1*(3), 42–55. https://doi.org/10.33422/ijsfle.v1i3.208

Vanderbilt University. (2024). *Mid-semester feedback through small group analysi*s. Center for Teaching. https://cft.vanderbilt.edu/services/individual/small-group-analysis/

Waters, A., & Vilches, M. L. C. (2008). Factors affecting ELT reforms: The case of the Philippines basic education curriculum. *RELC Journal, 39*(1), 5–24. https://doi.org/10.1177/0033688208091138

About the Authors

John Daryl B. Wyson has been teaching English for two decades now. From his humble beginning as an English as a Foreign Language tutor, he eventually became a faculty member of secondary and tertiary education institutions. At present, he teaches various English subjects at the Philippine Science High School–Main Campus. He has an MA degree in English Language and Literature Teaching and a BA degree in Communication from the Ateneo de Manila University. He is currently pursuing his PhD in English Language Education at the Philippine Normal University–Manila.

Zarita A. Manalo is the Bachelor of Secondary Education (BSEd) program coordinator of the Cavite State University–Naic Campus. She finished BSEd major in English at the Polytechnic University of the Philippines–Maragondon Campus and has an MA in Christian Education from the Presbyterian University and Theological Seminary of Seoul, South Korea. In addition, she completed the coursework for the

degree MA in English Language Teaching at the Philippine Normal University–Manila, where she is also pursuing her PhD in English Language Education.

Merry Ruth Morauda Gutierrez, PhD is a Full Professor working fulltime at the College of Advanced Studies of the Philippine Normal University (PNU)–Manila. In 1997, she joined PNU as a faculty member of the Department of Reading and Literacy. Over the years, she has served the university in various capacities as Head of Center for Reading and Literacy, Director of Graduate Research Office, and Graduate Representative to the University Curriculum Management and Instructional Materials Office of the Vice President for Academics, to name a few.